



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,082	03/16/2001	Hongli Willimann	1775	2277

7590 04/10/2003

Thomas F Roland  
National Starch & Chemical Company  
Box 6500  
Bridgewater, NJ 08807-0500

EXAMINER

EGWIM, KELECHI CHIDI

ART UNIT	PAPER NUMBER
----------	--------------

1713

6

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS6

**Office Action Summary**

Application No.

09/744,082

Applicant(s)

WILLIMANN ET AL.

Examiner

Dr. Kelechi C. Egwim

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 March 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 36-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 36-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other:

### DETAILED ACTION

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered new claims 35-46 have been renumbered 36-47.

Based on applicant comments/remarks, it is clear that applicant intended to cancel all of the originally filed claims in favor of the new claims. As such, claims 1-35, originally filed, have been canceled.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 36-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are rendered indefinite because, claim 36, from which the balance of the claims depend, defines a T<sub>g</sub> for the dispersion. Since T<sub>g</sub> is not a property of an aqueous dispersion, but rather a property of a particular polymer, it is unclear what limitation applicant is attempting to encompass by the recited T<sub>g</sub>.

Art Unit: 1713

The claims are further rendered indefinite in that the polymer in the dispersion is a heterogeneous polymer, which by definition would have polymer regions with different Tg's. If the Tg is in reference to the polymer in the dispersion, is it the Tg of the first (cationic) polymer, the second polymer or an effective Tg of the combination? This is not clear in applicant's claims.

4. In addition, claim 44 recites, "wherein said monomers comprise ..." in claim 36. However, since claim 36 recites at least two different groups or mixtures of monomers, it is not clear which "monomers" applicant is attempting to modify in the claim. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 36, 38, 40-44, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Maslanka et al. (USPN 4,235,982).

In col. 2, Maslanka et al. teach

a) forming a polymer from a monomer mixture comprising cationic quaternary salt monomers (reactive emulsifying agent); and

Art Unit: 1713

b) adding additional monomer and further polymerizing the mixture to obtain a heterogeneous (core-shell) polymer.

In col. 9, lines 48-55, Maslanka et al. teach that the latex is subsequently dried and has particle sizes between 0.1 to about 2 microns (100 to about 2000 nm).

Thus, the requirements for rejection under 35 U.S.C. 102(b) are met.

7. Claims 36, 38-44, 46 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Katayama et al. (USPN 5,171,764).

In col. 2, lines 20-48, Katayama et al. teach

a) forming a polymer from a monomer mixture comprising cationic quaternary salt monomers (reactive emulsifying agent); and

b) adding additional monomer and further polymerizing the mixture to obtain a heterogeneous (core-shell) polymer, wherein the particle sizes of the final polymers are less than 500 nm (col. 25, lines 40-43) and the particles are dried prior to application.

Thus, the requirements for rejection under 35 U.S.C. 102(b) are met.

Regarding claim 47, while the cited reference may not specify the mode of drying the latexes, the dried latexes are still the same as the presently claimed dried latexes and the products are still anticipated. See *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Art Unit: 1713

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kelechi C. Egwim whose telephone number is (703) 306-5701. The examiner can normally be reached on M-T (7:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

A handwritten signature in black ink, appearing to be 'KCE', with a long, sweeping horizontal line extending to the right.

KCE  
March 24, 2003